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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,603	05/25/2001	Paul Zientek	CASM117201	5858

7590 03/24/2003  
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EXAMINER

TREMBLAY, MARK STEPHEN

ART UNIT	PAPER NUMBER
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2827

DATE MAILED: 03/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/787,603	<b>Applicant(s)</b> ZIENTEK ET AL.	
	<b>Examiner</b> Mark Tremblay	<b>Art Unit</b> 2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 17-21 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 10-16 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \*   c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: _____                                    |

Applicant: Zientek et al.

Filing date: 5/25/2001

***Claim Objections***

5 Claims 10-16 and 22 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim may not depend from other multiple dependent claims. See MPEP § 608.01(n). Accordingly, the claims 10-16 and 22 not been further treated on the merits.

***Claim Rejections - 35 USC § 112***

10 Claims 1-9, 17-21, and 23-25 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. All of the independent claims contain the term "sheet-like" which is indefinite. Applicant must either define in the claims a sheet, or something other than a sheet.

15 Re claim 23, "the die" lacks antecedent basis.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

20 A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

25 Claims 1-6, 9, and 17-18 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent #5,517,338 to Vaughn et al. ("Vaughn" hereinafter). Vaughn discloses a security document (col. 2, lines 28-29) comprising a sheet-like substrate having one or more layers containing solid inorganic particles (e.g. gold, silver, palladium, etc.) of controlled shape (generally spherical, col. 3, lines 12-16) for forming an authentication device (e.g. a hologram) in a first location (e.g. on the surface) on a security document, the particles having at least a first dimension in the range of 1 to 200 (see column 3, lines 1-11) nanometers.

30 Re claims 2-4, Vaughn teaches that the particles are substantially spherical, within preferably about 20%. This means that the mirror will comprise particles which are by chance

very spherical, and particles which are elongated. With a macroscopic sized mirror, e.g. 1 centimeter square, such as would be found on a typical security document with a hologram, e.g. a Visa card, and e.g. 100 nanometer sized particles, there will be about a trillion of these particles since it would take 1 million particles laid end to end to traverse one centimeter. If a percentage of them are elongated, then billions are elongated. Statistically, every one of these must have its longitudinal axis aligned within one degree of thousands or millions of others, since there are only a limited number of orientations in degree-sized chunks. So, even in the case where there is no diffraction grating or holographic relief pattern as taught by Vaughn, there would be sets of elongated particles aligned in every direction, and for every direction, there would be other sets aligned orthogonally to it.

Re claim 9, Vaughn teaches holograms, which inherently involve polarization of light, as well as diffraction gratings, etc.

Re claims 17-18, see example 10.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7-8, 19-21 and 23-25 are rejected under 35 U.S.C. § 103 as being unpatentable over Vaughn in view of U.S. Patent Application #2002/0015836 A1 to Jonza et al. ("Jonza" hereinafter). Vaughn teaches the features of the invention as described above, but fails to teach that holograms can be used as polarizing films. Instead, Vaughn relies on the skill of the artisan to understand what holograms are and their uses. Jonza teaches that holograms can be used in

security documents as polarizers, which can be verified by a polarization verifier. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to apply the method of fabricating holograms taught by Vaughn to uses of holograms known in the art including the Jonza disclosure, because Jonza teaches that holographic polarizers can increase the security of a document and can be verified by a polarization verifier.

Re claims concerning specifically "electrodeposition", Official Notice is taken that "electrodeposition of a metal substance on a substrate" is old and well known in the art. See In Re Malcolm 1942 C.D.589:543 O.G. 440. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use well known electrodeposition because it is a known equivalent for forming metal layers on substrates to the exemplary process taught by Vaughn.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent #6,120,882 is cited for showing a security document having a layer of microspheres.

U. S. Patent #6,060,143 to Tompkin et al., U. S. Patent #6,045,894 to Jonza et al., U. S. Patent #5,760,961 to Tompkin et al. and U. S. Patent #5,729,365 to Sweatt is cited for showing a security document relying on nanometer scale features for optical effects.

***Voice***

Inquiries for the Examiner should be directed to Mark Tremblay at (703) 305-5176. The Examiner's regular office hours are 10:30 am to 7:00 pm EST Monday to Friday. Voice mail is available. If Applicant has trouble contacting the Examiner, the Supervisory Patent Examiner, Michael Lee, can be reached on (703) 305-3503. Technical questions and comments concerning PTO procedures may be directed to the Patent Assistance Center hotline at 1-800-786-9199 or (703) 308-4357.

  
**MARK TREMBLAY**  
**PRIMARY EXAMINER**

March 23, 2003